

## WHAT IS CLAIMED IS:

1. A method of making a catalyst for carbon nanotubes and nanofibers, comprising:

heating oxygen compound of transition metal in  
5 oxidative ambient at a temperature of 800°C through 1,500°C to be transformed into an agglomerated transition metal oxide; and

powdering the agglomerated transition metal oxide into a minute particle.

10 2. The method according to claim 1, wherein the transition metal includes one or more selected from a group consisting of nickel (Ni), cobalt (Co), iron (Fe), molybdenum (Mo), and chrome (Cr).

3. The method according to claim 1, wherein the  
15 oxidation compound of the transition metal includes one or more selected from a group consisting of transition metal oxide, hydroxide, carbide, sulfide and nitride.

4. The method according to claim 1, wherein the agglomerated transition metal oxide is powdered to have  
20 an average particle size of 500µm or below.

5. The method according to claim 1, wherein the oxygen compound of the transition metal includes oxygen compound of copper.

6. The method according to claim 5, wherein the  
25 oxygen compound of copper ranges from 10% to 50% weight

with regard to 100% weight of the transition metal oxide.

7. The method according to claim 6, wherein the oxygen compound of the transition metal is heated at a temperature of 800°C through 1,000°C.

5        8. The method according to claim 1, wherein the oxygen compound of the transition metal is heated together with a support material selected from a group consisting of silica, alumina and magnesia.

9. The method according to claim 8, wherein the  
10 oxygen compound of the transition metal is heated at a temperature of 1,000°C through 1,400°C.

10. A catalyst for carbon nanotubes and nanofibers, which has an average particle size of 500µm or below and in which transition metal oxide and copper oxide are  
15 sintered.

11. A catalyst for carbon nanotubes and nanofibers, which has an average particle size of 500µm or below and in which transition metal oxide and a support material selected from a group consisting of silica, alumina and  
20 magnesia are sintered.

12. The catalyst according to claim 10 or 11, wherein the transition metal includes one or more selected from a group consisting of nickel (Ni), cobalt (Co), iron (Fe), molybdenum (Mo), and chrome (Cr).